

January 14, 1998

Superfund Fact Sheet

Bunker Hill

Kellogg, Idaho

1997 Wrap up - More to Come in 1998

1997 was an extremely active year at the Bunker Hill Superfund Site. The Environmental Protection Agency (EPA) and the Idaho Division of Environmental Quality (IDEQ) are excited about the progress made in 1997 and look forward to an even better 1998. We've turned the corner and the end is in sight – the Smelter Complex is getting capped and covered, tailings are being moved, and gulch work is almost finished. This fact sheet is a summary of the past year's events and projections for 1998.

EPA and IDEQ would like to thank the Superfund Task Force, local communities, Corps of Engineers, Morrison and Knudsen Corporation, Upstream Mining Group, Union Pacific Railroad, Stauffer Chemical Company, and all parties who helped make this a successful and productive year - even through one of the roughest winters of the decade.

Tailings Removals

This past April, contractors began the construction of a seven-mile haul road that allows trucks to transport excavated tailings from the Smelterville Flats area (on both sides of I-90), to the Central Impoundment Area (CIA). The majority of the haul road was finished at the end of June and crews have been excavating and transporting tailings since last summer. Excavation work ended on December 5, 1997, because the mine waste was getting too damp to move and compact.

In general, contractors are excavating down to four feet (or deeper if necessary) and then regrading or backfilling where needed. There has been public concern about whether all the tailings are being removed from the flats. To ensure that all tailings are being excavated, IDEQ samples the soil to make sure contaminants are not left behind. Contractors moved over 290,000 cubic yards of contaminated tailings last summer, about 25 percent of the total amount.

A major part of the tailings removal/river reconstruction job, diverting the South Fork River, was completed this past year. The South Fork is being re-channeled and its banks are

being rebuilt in order to maintain the river's position north of the flats. Re-channeling the river for the upcoming winter is important because it was flooding onto the flats and spreading contamination.

Tailings excavation is expected to begin again in March (if the ground is dry enough). We expect all tailings from the flats to be excavated and moved to the Central Impoundment Area by the end of next fall. To ensure that construction time is maximized, we expect to hire two shifts of workers on the flats this spring.



Dewatering trenches around the tailings excavation

The CIA, expected to cover about 200 acres, will be the container for most of the site's minetailings and waste (over 1 million cubic yards). All of the tailings that are being moved from the Smelterville Flats area (the largest area of contamination) will be placed in the CIA, along with debris and waste from other areas of the site.

The closure plan design of the CIA is in progress and will be mostly complete by February 1998. The State is taking the lead on the design, with contractual support from Terragraphics and CH2M HILL. To ensure that the engineering design is as accurate as possible, IDEQ is not planning to finalize the CIA's closure plan until all the material is excavated next fall.

The CIA will be capped with a plastic liner and covered with grass and small shrubs. Runoff drainages will be constructed around portions of the CIA so that water can be diverted quickly from the liner to avoid standing water. Bids for contracts will go out in 1998, and construction of the CIA cap is expected to begin in 1999.



The newly built Bunker Creek 100-year storm capacity channel

Yard Remediations

A total of 1,351 residential yards, commercial properties, and rights of way at the Bunker Hill Site have been remediated to date. In 1997, the Upstream Mining Group (UMG - local mining companies responsible for cleanup) completed the excavation of 203 residential yards, 29 commercial properties, 8 rights-of-way and closed 6 domestic wells. The UMG worked on completing the area between Helen and Rose Streets on the North side of Kellogg (the 1997 target area).

In 1998, the target area for yard remediation will continue to be on the North side of I-90 in Kellogg from Rose Street to the Silver Ridge Mountain Lodge. After that area is finished, the UMG will move to the South side of I-90, still focusing on Kellogg. Homeowner negotiations for the 1998 season began in the fall of 1997 and will resume again once the snow melts this spring.

The UMG conducted soil sampling in Wardner, Page, and Ross Ranch to determine which properties sample greater than 1,000 parts per million (ppm) for lead. Yard remediations for yards testing greater than 1,000 ppm lead in these communities will begin after Kellogg's properties are completed.



Task Force members, Charles Peterson, Joe Hauser, and Eric Lassfolk smile for the camera with Michelle Sturgell, IDEQ, at the Bunker Hill Project Office in Kellogg.

UPRR Right of Way Remediation

During 1996, the tracks of the Union Pacific Railroad right of way from Elizabeth Park to Enaville were removed and salvaged. In 1997, most of this right of way was covered with a gravel or soil barrier. One of the most noticeable areas was the Kellogg Greenbelt area which begins at the old Kellogg Railroad Depot and ends near the Gondola parking lot (approximately 1.5 miles long). This portion of the right of way was remediated as a recreational trail/multiple use area. The trail portion of this area will be paved in the spring and the picnic areas, trees, and hydroseed are already in place. There will be a marked improvement in this area's appearance once the grass begins to grow. The remainder of the right of way is also suitable for recreational purposes, although vehicle traffic is discouraged.



Bonnie Samms, with the Army Corps of Engineers, helps manage office affairs.

1997 Blood Lead Levels

Blood lead levels in children, and soil and house dust lead concentrations have been monitored throughout the Bunker Hill Superfund Site since residential soil remediation activities began in 1989. As stated in EPA's Records of Decision (RODs), the Remedial Action Objective (RAO) or cleanup goal for the site is to have less than 5% of children with blood lead levels of 10 micrograms per deciliter (ug/dl) or greater, and to have no children with blood lead levels of 15

ug/dl or greater. During the first three years of soil removals, the percentage of young children living in homes with contaminated soils was reduced from near 90% to 30%. Average blood lead levels decreased during the first three years by 40%.

Every year the Panhandle Health District examines children to determine if RAO goals are being met. Based on 1997's sampling results, 11% of the children site-wide have blood lead levels greater than 10 ug/dl - this is a decrease of 1% from 1996.

Smelterville Blood Lead Levels Decrease

Residential soil cleanup activities have been completed in Smelterville. In 1989, when Smelterville yard remediation began, 80% of children in Smelterville had lead levels greater than 10 ug/dl. In 1997, three children (9%) tested high for lead. Follow up investigations of the three children revealed that they had moved to Smelterville during the year from homes with contaminated yards in other communities. ***As a result, for the first time in decades, no lead poisoning of children was attributed to environmental exposures in Smelterville!***

Hillsides Restoration

Vegetative restoration of barren hillsides is important both for environmental and aesthetic reasons. Vegetative growth has been a major challenge on the hillsides because of the poor quality of soil (low nutrient levels) and the soil's inability to hold water. Without vegetation to help anchor the soil, the hillsides will continue to erode onto clean areas and into the river.

To determine which type of vegetation and fertilizer mixture is most successful on the hillsides, EPA has been overseeing the planting and monitoring of test plots throughout the year. The goal of monitoring is to collect data that will help EPA develop a design for treatment that will facilitate full-scale revegetation.

In 1998, bids for contract work on the hillsides will go out late winter/early spring, as EPA will begin remediation of hillsides in the late spring.

The Department of Agriculture has also been conducting test plots on site to determine whether biosolids are an effective fertilizer for the soil on site, and may use biosolids on parts of the hillsides. Biosolids are the product of municipal wastewater treatment facilities and are recycled as fertilizer and soil amendment. EPA's strategy for hillsides remediation will be flexible and incremental - EPA will continue to look for the most effective combination of seeds and fertilizer as remediation efforts take place.

Milo Creek Construction

As everyone knows, 1997 was not a good year for Milo Creek; however, as a result of the 1997 flooding disaster, 1998 will bring a new, permanent containment system for Milo. The State of Idaho is taking the lead on the engineering design of the Milo Creek containment system, along with the EPA, the Federal Emergency Management Agency (FEMA) and the U.S. Natural Resource Conservation Service (NRCS). The 60% design draft was completed the end of December and sent to Shoshone County, cities of Kellogg and Wardner, State Bureau of Disaster Services, NRCS and IDEQ for review. The design is expected to be complete by the end of this winter and bids for construction are expected to go out next spring. Cost for the containment system is estimated at \$14 million dollars and potential funding sources are still being investigated.

Due to contamination caused by Milo Creek flooding, FEMA funded \$500,000 worth of yard remediations in Kellogg in 1997. The Panhandle Health District supervised the cleanups, with technical assistance from Terragraphics

consulting company.

Upper Milo: Winter stabilization work on the upper portion of Milo Creek is finished and the creek is stabilized. Stabilization work began late in the season because EPA spent the fall negotiating with the owner responsible for cleanup of upper Milo. The responsible party completed part of the required stabilization work and EPA finished the rest.

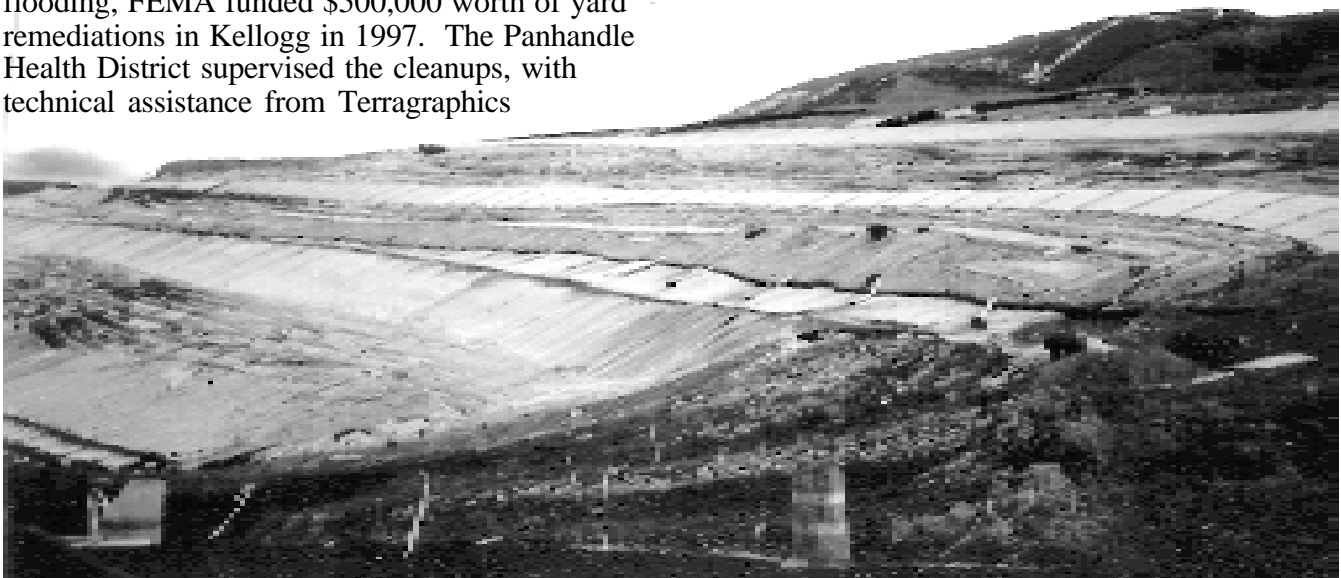
EPA's contractors cleaned out three sediment basins and overflow channels and repaired rock check structures in the creek. Contractors also installed a new grizzly (a grate-like structure) to trap material from flowing down into lower Milo. The creek is now stabilized for winter runoff. EPA will pursue cost recovery actions for the money spent on the remaining work that was not completed by the responsible party.

Other Site Activities

Gulch Work

A lot of progress was made in 1997 on the gulches, and work continues into 1998. The gulches are 65% complete and expected to be finished by fall of 1998. Gulch remediation is important because water runs down through the gulches and picks up contamination and carries it to the river.

Contaminated soils in the gulches are being excavated and either hauled to the CIA or used as fill in the Smelter Closure Area. Streams



Smelter Complex closure plastic liner with a dusting of frost. (See next page)

running through the gulches are being re-channeled and stabilized and gabions (rock dams) are being installed to trap sediment debris. After excavation, the soil is evened out and regraded and then planted with vegetation.

Smelter Closure

Once a pile of twisted metal and demolition debris, Phase I one of the smelter complex is now smoothly graded and covered with a high-density plastic liner and slag. The slag is being placed on top of the liner to facilitate proper drainage and runoff. In the spring, contractors will place top soil on the slag and plant grass

seed.

Phase II, the final area to be capped, is currently being filled with soil from Government Gulch and will go through the same process as Phase I. After being filled and graded, it will be capped with a plastic liner, with slag and top soil placed on top. This work will continue into next summer and the Smelter Closure Area is expected to be completed by September of 1998.

Contractors are also constructing berms around the closure area to help catch water that runs off the slope. The berms will be lined with an anti-erosive, heavy plastic material so that runoff will

Superfund Task Force Meeting February 19!



The Bunker Hill Task Force

Where? Kellogg Middle School Library

When? Thursday, February 19, 7:00 to 9:00 p.m.

Call Jerry Cobb (number listed at the end of this fact sheet) for more information about the Task Force.

In 1985, the Superfund Task Force was established to represent the communities' concerns at the Bunker Hill site. For 12 years, the Task Force has been holding public meetings regularly to

update the community about site-wide activities. The Bunker Hill Task Force has been and continues to be a rigorous "watch-dog" over EPA and IDEQ. The Task Force serves a unique role that is now being replicated all over the nation. Current task force members include, Duane Little, Chairman, Gary Beck, Joe Hauser, Gary Hoffman, Billie Irwin, Eric Lassfolk, Ross Stout, Charles Peterson, and Bill Zanetti.

Don't miss the chance to see the Task Force take EPA and IDEQ to task! As projects end and others begin, a lot of tough, long-term issues are being raised by the Task Force. The public is encouraged to come to the Task Force meetings to hear about what's happening on site and how the community is being represented.



Rob Hansen, IDEQ, speaks with the Task Force before the meeting.

not affect the integrity of the berms.

West Page Swamp Pond

The Upstream Mining Group (UMG) is almost finished the Page Swamp Pond tailings removal that began in November, 1997. The project is expected to be finished by the end of this month.

Upcoming Project Certifications (they'll be officially finished!)

Certification is the process by which a State or EPA officially "signs off" on a project and declares that the cleanup goals have been met. This spring, EPA and IDEQ anticipate three big certifications this spring: the Smelterville Soils Remediation cleanup, the Gypsum A-4 Pond project completed by Stauffer Chemical Company, and the Union Pacific Railroad remediation.

EPA Staff Change

EPA would like to welcome Mary Kay Voytilla to the Superfund Team. Howard Blood, one of EPA's Project Managers, moved to Korea to work on a project for the US Army Corps of Engineers. Mary Kay has been working in Region 10 for eight years managing residential cleanups at another smelter superfund site in Ruston, Washington.



EPA Project Managers, MaryKay Voytilla and Sean Sheldrake.

Site History

The Bunker Hill site spans 21 square miles in the heart of the Silver Valley in northern Idaho. The communities of Kellogg, Smelterville, Wardner, Pinehurst, Page, Ross Ranch and Elizabeth Park live within the site's boundaries, totaling over 6000 in population.

Mining activities began in the late 1800's in the Silver Valley and in 1917 smelter operations began at the Bunker Hill Site. In 1968, Gulf Resources and Chemical Corporation (Gulf) purchased the Bunker Hill facility. In 1973, a fire at the baghouse (a system of cloth bags that filtered lead-contaminated dust from the smokestacks) all but destroyed the smelter's air pollution control capacity. As a result of the fire, lead emissions from the smelter increased dramatically. Less than a year after the fire, a sick child tested extremely high for lead contamination. Local officials then began testing other children in the valley and found that many had very high levels of lead in their blood. As a result, the Panhandle Health District and the State of Idaho developed a lead intervention program and a yearly blood screening program to monitor area children.

Contamination includes tons of mine tailings that were directly deposited into the Coeur d'Alene River, causing major contamination of heavy metals throughout the floodplain. The primary contaminant in the valley is lead. Lead causes brain and central nervous system damage, chronic kidney and cardiovascular disorders and impaired fetal development.

In 1983, Bunker Hill was added to the National Priorities List (NPL), a list of the nation's most hazardous waste sites. EPA has identified 17 private companies believed to be responsible for site cleanup, some of whom are working in partnership with EPA and the Idaho Division of Environmental Quality (IDEQ) to support cleanup.

Cleanup decisions are documented in two Records of Decision (RODs). In 1991, the Populated ROD was signed, covering residential & commercial yard cleanup and in 1992, the Non-Populated ROD was signed, documenting cleanup decisions for the rest of the Bunker Hill site.

EPA Awards People's Action Coalition (PAC) A Technical Assistance Grant

EPA Technical Assistance Grants are given to citizen's groups affected by Superfund sites. The grants are given so that communities can hire independent technical advisors to help them translate site-related information and participate in cleanup decisions.

Spring of 1997, the People's Action Coalition received an EPA TAG for \$50,000 over a three-year period. The PAC will be holding periodic public meetings to inform the community about their findings and project efforts. If you are interested in getting more information about the People's Action Coalition TAG, please contact Barbara Miller at (208) 784-8891. .

Your Right to Know

For more information about the Bunker Hill site and access to all public documents related to the site, you can visit the following information repositories:

Kellogg Public Library: 16 West Market, Kellogg Idaho 83837 (The Kellogg Public Library holds the entire site file – other local libraries have site information, but do not contain all site files).

Pinehurst/Kingston Library: 107 Main Street, Pinehurst, Idaho 83850

EPA Region 10 Records Center: 1200 6th Avenue, Seattle, Washington, 98101

EPA Toll Free number (1-800-424-4372)

Please feel free to visit or call **(208-783-5781)** the **Superfund Project Office** located at 1005 McKinley Avenue in Kellogg.

Questions or Concerns?

Please call either **Jerry Cobb**, Panhandle Health District in Kellogg at (208) 783-0707 or **Nancy Wilson**, EPA Community Relations Coordinator in Seattle, at 1-800-424-4372 or directly at (206) 553-1237.

For those with impaired hearing or speech, please contact EPA's **Telecommunications Device for the Deaf (TDD)** at **(206) 553-1698**. To ensure effective communication with everyone, additional services can be made by calling EPA's toll-free number at **1-800-424-4372**.

Web Surfing for EPA Region 10: Check out our homepage at:
<http://www.epa.gov/r10earth>

Folks At the Superfund Project Office Wishing Everyone a Happy New Year!



Front Row, left-to-right: Rich Fink, COE, Ed Moreen, COE, Mike Mahoney, COE, Scott Peterson, IDEQ, Nick Zilka, IDEQ, Don Rainey, MK, Alan Benfer, MK, Jeff Skinner, MK, Bob Hunter, MK. Second Row: Al Schuckers, MK, Mike Stromberg, MK, Gary Johnson, MK, JoAnn Carlson, MK, Tracy Ellwein, MK, Monica Thurston, MK, Mary Goodson, MK, Chuck Moss, IDEQ, Tom Bourque, Terragraphics, Pat Trueba, MK, Rob Hanson, IDEQ. Third Row: Don Ferguson, MK, Ken Worley, MK, Bill Ingersoll, MK, Tracy Collings, MK, Michelle Sturgell, IDEQ, Bob Porter, MK.



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